DATE STARTED Nov. 21 1960 DATE COMPLETED June 13, 1961

TOTAL DEPTH 1880'

DIAMETERS 25" Surface to 213'
19½" from 213' to 955'
17½" from 955' to 1230'
15" from 1230' to 1305'
10" from 1305' to 1880'

CASING RECORD
30" curbring from surface to 10'
20" O D ¼" wall pipe surface to 213'
18" O D ¼" wall liner 536' to 750' w/shoes
16" O D 3/8" wall liner 1125' to 1236'w/shoes
14" O D 7/16" wall pipe surface to 604'with 14" x 10" swedge nipple on bottom
10" I D .365 wall pipe 604' to 1300' w/shoe
14" & 10" pipe cement grouted in place using 485 barrels and 28 bags of cement.

STRATA RECORD

From	To	Thickness	Description of Beds
0	5	5	Top soil
5	35	30	Yellow sandy clay
35	72	27	Gravelly blue clay
72	104	32	Gravelly blue clay & boulders
104	109	5	Medium Gravel with clay
109	112	3	Clay & gravel streaks
112	135	23	Blue sticky clay-some small boulders
135	145	10	Yellow clay caved over night
145	148	3	Blue clay
148	153	5	Blue shale
153	154	1	Boulders & gravel
154	160	6	Gray medium sand-boulders at 160'
160	170	10	Blue clay-some boulders
170	195	25	Gray shale-hard-boulder at 193'
195	199	4	Gray shale -softer and sticky
199	200	1	Streak of brown shale
200	212	12	Gray shale
212	228	16	Limestone-gray
228	267	39	Lime & shale harder at 255' gray
267	270	3	Lime & brown shale
270	277	7	Lime & shale
277	332	55	Lime gray harder at 330'
332	334	2	Lime & shale
334	337	3	Lime
337	363	26	Brown lime
363	379	16	Gray lime

TOWN OF DYSART WELL NO 2 DYSART IOWA

City of Dysart, Iowa Well No. 2 — June 19, 1961

Dysart, Iowa — Teel & Friedlein

10" Bottom — International UD-1091

1880' — 405' - 8" x 1-15/16"

405' — 9 stage 10"

221' — Peerless

6" x 4"

						TEMP.	REMARKS
12:15PM			184.0	221			START OF TEST
12:30	19	278	99	306	85		Muddy
12:45	16.5	260	103	302	81		
1:00	19.5	280	108	297	76		Sand
1:15	20.5	290	106	299	78		"
1:30	21.5	295	106	299	78		"
1:45	22.5	300	104	301	80		"
2:00	23.5	308	104	301	80		"
2:15	23	305	104	301	80		"
2:30	24	310	104+	301	80		Sandy
2:45	24.5	312	104	301	80		"
3:00	24.5	312	104.5	300.5	79.5		"
3:10	63.5	502	59	346	125		"
3:17	63	500	45	360	139	57	"
3:25	58	482	48	357	136		"
4:00	65	508	52	353	132		18.1 gr/gal
4:30	65	508	53	352	131		2½ ppm Fe
5:00	65.5	510	56	349	128		Fouride 0
5:20		Slowed down to change pipe.					Chloride 10
5:30		Stopped					Alk 270

City of Dysart, Iowa Well No. 2 — June 19, 1961

Dysart, Iowa — Rudy & Kuhl

10" Bottom — International UD-1091

1880' — 405' - 8" x 1-15/16"

405' — 9 stage 10"

221' — Peerless

6" x 4"

6:15PM			Started again				
6:30	64	504	80	325	104		Sandy
7:00	58	482	76	329	108		"
7:30	58	482	72	333	112		"
8:00	57.5	480	72	333	112		Upped speed
8:30	61	493	72	333	112		Sandy
9:00	64	504	69	336	115		"
9:30	64	504	68	337	116		"
10:00	64.5	507	68	337	116		"
10:30	64	504	68	337	116		"
11:00	64	504	68	337	116		"
11:30	64	504	68	337	116		"
6-20-61 12:00	65	508	68	337	116		"
12:30	66	511	68	337	116		"
1:00AM	66	511	67	338	117		"
1:30	66.5	512	67	338	117		"
2:00	66.5	512	68	337	116		"
2:30	66.5	512	68	337	116		"
3:00	66.5	512	68	337	116		"

City of Dysart, Iowa Well No. 2 June 20, 1951
Dysart, Iowa Rude, Friedlein & Teal

10" Bottom International UD-1091
1880' 405'- 8" x 1-15/16"
405' 9 stage 10"
221' Peerless
6" x 4"

			184.0	221				START OF TE
4:00AM	66.5	512	68	337	116			Sandy
4:30	66.5	512	68	336	116			"
5:00	66.5	512	69	336	115			"
5:30	66.5	512	69	336	115			"
6:00	66.5	512	69	336	115			"
6:30	65.5	510	70	335	114			"
7:00	65.5	510	71	334	113			"
7:30	65.5	510	71	334	113			
8:00	64	505	72	333	112			
8:30	64	505	72	333	112			
9:00	63.5	502	72	333	112			
9:30	62	498	72	333	112			
		Changed to 6 x 5 orifice. Started 9:45						
9:45	34.5	710	38	367	146			Sandy
10:00	31.5	690	39	366	145			"
10:30	31	682	35	370	149			"
11:00	30.5	678	32	373	152	Hard. 18.1 gr/gal		"
11:30	30.5	678	33	372	151	Fe 1.8 ppm		
12:00	30.5	678	34	371	150			

WELL TEST DATA SHEET

Job: City of Dysart, Iowa Well No. 2 Date tested: June 20, 1961

Location: Dysart, Iowa Tested by: Teel, Freidein & Zoll

Dia. of well: 10" Bottom Pump head: International UB-1091

Depth of well: 1880' Column and shaft: 405'-8" x 1-15/16"

Length of airline: 405' Bowls: 9 stage 10"

Non-pumping level: 221' Manufacturer: Peerless

Orifice size: 6" x 5" Serial No.:

TIME	ORIFICE READING	R.P.M.	AIR GAUGE READING (LBS.)	PUMPING LEVEL	DRAWDOWN	DISCH. PRESSURE LBS.	DISCH. PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
			184.0	221						START OF TEST
12:15PM		Stopped to change pipe.								
1:15	32.5		68							
1:30	44	826	27	378	157					Sandy
1:38	43	805	20	380	164					"
2:00	28½	646	35	370	149					"
2:30	27.5	630	42	363	142					"
3:00	26.5	630	46	359	138					"
3:30	26.5	638	47	358	137					"
4:00	27	635	47	358	137					"
4:30	27	635	47	358	137					"
5:00	13	445	52	353	132					"
5:05	14	465	73	332	111					"
5:30	15	480	78	327	106					"
		Stopped. Started at 5:45								"
6:00	26	622	60	345	124					"
6:30	26	622	56	349	128					"
7:09	25.5	620	54	351	130					"
7:30	25.5	620	54	351	130					"
8:00	25.5	620	53	352	131					"

WELL TEST DATA SHEET

Job: City of Dysart, Iowa — Well No. 2 — Date tested: June 20, 1961

Location: Dysart, Iowa — Tested by: Teal & Rude

Dia. of well: 10" Bottom — Pump used: Driver: International UD-1091

Depth of well: 1880' — Column and shaft: 4058-8" x 1-15/16"

Length of airline: 405' — Bowls: 8 stage 10"

Non-pumping level: 221' — Manufacturer: Peerless

Orifice size: 6" x 5" — Serial No.:

TIME	ORIFICE DIFFERENTIAL	G. P. M.	AIR LINE READING (SET)	PUMPING LEVEL	DRAWDOWN	DISCH. PRESSURE LBS.	DISCH. PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
8:30PM	25.5	620	52	353	132					START OF TEST
9:00	25.5	620	52	353	132					
9:30	25.5	620	51	354	133					
10:00	25.5	620	51	354	133					
10:30	25.5	620	51	354	133					
11:00	25.5	620	51	354	133					
11:30	25.5	620	52	353	132					
6-21-61 12:00	25.5	620	51	354	133					
12:30	25.5	620	51	354	133					
1:00AM	25.5	620	51	354	133					
1:30	25.5	620	51	354	133					
2:00	25.5	620	51	354	133					
2:30	25.5	620	51	354	133					
3:00	25.5	620	51	354	133					
3:30	25.5	620	51	354	133					
4:00	25.5	620	51	354	133					
4:30	25.5	620	51	354	133					
5:00	25.5	620	51	354	133					
5:30	25.5	620	51	354	133					
6:00	26	622	51	354	133					

WELL TEST DATA SHEET

Job City of Dysart, Iowa Well No. 2 Date tested June 21, 1961

Location Dysart, Iowa Tested by Teal & Friedlein

Dia. of well 10" Bottom Pump used Driver International UD-1091

Depth of well 1880' Column and shaft 405'-8" x 1-15/16"

Length of airline 405' Bowls 9 stage 10"

Non-pumping level 221' Manufacturer Peerless

Orifice size 6" x 5" Serial No.

TIME	PIEZOMETER READING (IN.)	G. P. M.	AIR GAUGE READING (FEET)	PUMPING LEVEL	DRAW-DOWN	DISCH. PRESSURE LBS.	DISCH. PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
	o	o			o		o			START OF TEST
6:30AM	26	622	51	354	133					
	Stopped. Change pipe. Start 6:48									
7:30	26.5	630	72	333	112					Sandy
8:00	25	610	65	340	119					"
8:30	24	600	62	343	122					"
9:00	24	600	60	345	124					"
9:30	24	600	59	346	125					"
10:00	24	600	59	346	125					"
10:30	24	600	59	346	125					"
11:00	23.5	595	59	346	125			Hard. 22 gr/gal Fe 1.1	58°	
11:30	23.5	595	58	347	126					
12:00	23.5	595	58	347	126					
	Slowed down to 450 gpm									
12:30PM	14	460	80	325	104					
1:00	13	450	84	321	100					
1:30	13.25	453	85	320	99					
2:00	13.5	455	86	319	98					
2:30	13.5	455	87	318	97					
2:30	Starting. Changing spped of motor. Surging									

City of Dysart, Iowa Well No.2
Dysart, Iowa

June 21, 1961
Friedlein & Zoll

10" Bottom
1880'
405'
221'
6" x 5"

International ED-1091
405'-8" x 1-15/16"
9 stage 10"
Peerless

TIME		G.P.M.			TEMP.	REMARKS
						START OF TEST
2:30PM						
2'38	41	790	62 to 36	Open throttle		Cloudy
2:38			34 to 62 6 minutes	Cooling off		Sandy
3:10						
3:10						
3:17	44	820	34 to 62 6 minutes	Open throttle		Cloudy
3:17						
3'50				Cooling off		Sandy
3'50						
3:57	42.5	800	76 to 52	Open throttle		Cloudy-sandy
3:57						
4:23			52 to 90 7 minutes	Cooling off		Sandy
4:23						
4:30	43	810	100 to 50 7 minutes	Open throttle		
4:30						
4:55				Cooling off		
4:55						
5:03				Open throttle		Cloudy-sandy
5:03						
5:25				Cooling off		Clearer
5:25						
5:31				Open throttle		
5:31						
5:45				Cooling off		
5:45						
5:52	43	810		Open throttle		
5:52						
6:07				Cooling off		
6:07						
6:15				Open throttle		
6:15						
6:30				Cooling off		
6:30						
6'37				Open throttle		
6'37						
6:53				Cooling off		
6:53						
7:00				Open throttle		

WELL TEST DATA SHEET

Job: City of Dysart, Iowa Well No. 2 — Date tested: June 21, 1961

Location: Dysart, Iowa — Tested by: Rude & Kuhl

Dia. of well: 10" Bottom — Pump used: Driver: International UD-1091

Depth of well: 1880' — Column and shaft: 405'-8" x 1-15/16"

Length of airline: 405' — Bowls: 9 stage 10"

Non-pumping level: 221' — Manufacturer: Peerless

Orifice size: 6" x 5" — Serial No.:

TIME	ORIFICE METER READING (IN.)	G. P. M.	AIR GAUGE READING (FEET)	PUMPING LEVEL (FEET)	DRAWDOWN	ROCK PRESSURE LBS.	ROCK PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
7:00PM										
7:15	0	0			0			Cooling		START OF TEST
7:15										
7:25	42		52	353				Open throttle		
7:25										
7:40								Cooling		Sandy
7:40										
7:47								Open throttle		
7:47										
8:02								Cooling		
8:02										
8:09	42.5	800	52	353				Open throttle		Sandy
8:09										
8:25								Cooling		
8:25										
8:32								Open throttle		
8:32										
8:47								Cooling		
8:47										
8:54								Open throttle		Sandy
8:58										
9:00	8							Cooling		
9:00										
9:18	42.5	800	52	353				Open throttle		
9:18										
9:33								Cooling		
9:33										
9:40								Open throttle		
9:40										
9:55								Cooling		
9:55										
10:02			52	353				Open throttle		
10:02										
10:17	8							Cooling		
10:17										
10:24	42							Open throttle		
10:24										
10:50								Cooling		
10:50										
12:00	26	620	62	343	122					Sandy

WELL TEST DATA SHEET

Job City of Dysart, Iowa Well No. 2 Date tested June 22, 1961

Location Dysart, Iowa Tested by Rude & Kuhl

Dia. of well 10" bottom Power unit Driver International-BD-1091

Depth of well 1880' Column and shaft 405'-8" x 1-15/16"

Length of airline 405' Bowls 9 stage 10"

Non-pumping level 221' Manufacturer Peerless

Orifice size 6" x 5" Serial No.

TIME	MANOMETER READINGS (INCHES)	G. P. M.	AIR GAUGE READING (FEET)	PUMPING LEVEL	REMARKS	DISCH. PRESSURE LBS.	DISCH. PRESSURE TEST	TOTAL PUMPING HEAD	TEMP.	REMARKS
12:00										
12:20AM	0	0			0		0	Cooling		START OF TEST
12:20										
12:30	42.5	800	52	352	131			Open throttle		
12:30										
12:50								Cooling		
12:50										
1:00	43	820	53	352	131			Open throttle		
1:00										
1:20								Cooling		
1:20										
1:30	43	820	53	352	131			Open throttle		
1:30										
1:50								Cooling		
1:50										
2:00			52	353	132			Open throttle		
2:00										
2:20								Cooling		
2:20										
3:00	43	820	52	353	132			Open throttle		
3:00										
3:20								Cooling		
3:20										
3:30	42		52	352	132			Open throttle		
3:30										
3:50								Cooling		
3:50										
4:00			52	352	132			Open throttle		
4:00										
4:20								Cooling		
4:20										
4:30	42		52	352	132			Open throttle		
4:30										
4:50								Cooling		
4:50										
5:00	42		52	352	132			Open throttle		
5:00										
5:20								Cooling		
5:20										
5:30	42		52	352	132					

WELL TEST DATA SHEET

Job City of Dysart, Iowa Well No. 2 Date tested June 22, 1961

Location Dysart, Iowa Tested by Friedlein & Zoll

Dia. of well 10" bottom Pump Make International HD-1091

Depth of well 1880' Column and shaft 405'-8" x 1-15/16"

Length of airline 405' Bowls 9 stage 10"

Non-pumping level 221' Manufacturer Peerless

Orifice size 6" x 5" Serial No.

TIME	PITOMETER READING (lbs.)	G.P.M.	AIR GAUGE READING (feet)	PUMPING LEVEL	DRAWDOWN	DISCH. PRESSURE lbs.	DISCH. PRESSURE feet	TOTAL PUMPING HEAD	TEMP.	REMARKS
	0	0					0			START OF TEST
5:30AM										
5:50								Cooling		
5:50										
6:00	42		52	353	132					
6:00										
6:20								Cooling		
6:20								Bottom of gallon jug		
6:29								covered with sand-cloudy		
6:29										
6:53								Cooling		
6:53								Layer of sand on bottom		
7:01								of jug:		
7:01										
7:20								Cooling		
7:20										
7:28										
7:28										
7:50								Cooling		
7:50										
7:58										
7:58										
8:20								Cooling		
8:20								Layer of sand in jug.		
8:27										
8:27										
8:45								Cooling		
8:45								1/8" of sand in bottom		
8:52								of jug.		
8:52								Cooling		Sand & clearer
9:20										
9:20										Sand & cloudy
9:27										
9:27								Cooling		
9:47										
9:47										Sandy
9:55										
10:25								Cooling		

WELL TEST DATA SHEET

Job: City of Dysart, Iowa Well No. 2 — Date tested: June 22, 1961

Location: Dysart, Iowa — Tested by: Friedlein & Zoll

Dia. of well: 10" Bottom — Driver: International ED-1091

Depth of well: 1880' — Column and shaft: 405'-8" x 1-15/16"

Length of airline: 405' — Bowls: 9 stage 10"

Non-pumping level: 221' — Manufacturer: Peerless

Orifice size: 6" x 5" — Serial No.:

TIME	PITOMETER READING PSI	G. P. M.	AIR GAUGE READING PSI	PUMPING LEVEL	DRAWDOWN	WATER PRESSURE GAUGE	WATER PRESSURE PSI	TOTAL PUMPING HEAD	TEMP.	REMARKS
	0	0			0		0			START OF TE
8:30AM										Sandy
2:30										
2:30										
2:45								Cooling		
2:45										
2:53	43									
2:53										
3:15								Cooling		
3:15										
3:23			57	348	127					
12:00Noon	8	350	90	315	94					Sandy
		RECOVERY CHECK								
1:00	13	450	117	288						
1:24			116	289						
1:25			127	278						
1:26			128	277						
1:27			129	276						
1:30			142	263						
1:35			155	250						
1:40			158	247						
2:00			162	243						
3:00			165	240						
3:30			175	230						

Tama County

February 1, 1961

TO: Dr. H. G. Hershey
FROM: Richard C. Northup
SUBJECT: Dysart town well.

A stop was made at the Dysart town well where 325' of samples were picked up. Drilling has reached 945' in the Galena, and at the time of my visit Varner Well Company was attempting to run a string of 18" casing to shut off the Maquoketa. The pipe had become stuck, and they may have to ream out the hole or, if the specifications can be changed, run a string of 16" casing instead. It seems foolish to me that the specifications would call for an 18" string at this point when they plan to set only a 10" string through the St. Peter. From the looks of things, they will not be drilling ahead for at least another week.

RCN

~~Stratigraphy~~

Nov. 30, 1960

Memo

To: Dr. H.G. Hershey
From: Fred H. Dorheim
Regarding: Trip to Dysart.

My planned trip to Dysart was delayed one day because of unavailability of transpottation.

I went up there this morning, along with Dick Northup, who wanted to see what was going on.

When we arrived there was no one at the drill, everything was shut down and locked up. We looked up one of the councilmen to try and find out where the drillers might be staying and found that they had gone to Dubuque. He understood that they were going to bring in a churn drill to replace the rotary.

We were able to see some of their drilling sheets and it appears from what we could see that the section is very similar to the well that was drilled near the water tower. The top of the Cedar Valley at about 205'.

The cores they had were dumped in a pile on the ground. Although they will be of very little value, we picked up what we could and brought in.

D H - Iowa
Dysart

July 12, 1961

Mr. R. J. Braun, Secretary
Varner Well & Pump Company
222 East Fourth Street
Dubuque, Iowa

Dear Mr. Braun:

Thank you very much for the copy of your driller's log of well No. 2 which was completed for the town of Dysart and the copy of the well capacity test data.

We appreciate your continuing cooperation in the water resources work in Iowa.

Very truly yours,

H. G. Hershey

HGH/jsm

July 14, 1961

Water Superintendent
Dysart,
Iowa

Dear Sir:

Under separate cover we are sending you a copy of our geologic log of the recently completed new well at Dysart which we hope will be of interest to you. Please let us know if you have any questions concerning this log.

Very truly yours,

H. G. Hershey

RCN/jsm

MASTER CARD - A

9-26-69
RP 11-22-70

STATE	COUNTY	LATITUDE DEG	LATITUDE MIN	LATITUDE SEC	N. or S.	LONGITUDE DEG.	LONGITUDE MIN.	LONGITUDE SEC.	NO SEQ.
1 2	3 4	5 6	7 8	9 10	11	12 13 14	15 16	17 18	19
19	86	42	09	55	N	092	18	28	1

WELL SCHEDULE

US GEOLOGICAL SURVEY

IOWA DISTRICT WRD

WELL NO. 12665 CO TAMA

OWNER DYSART TØWN ADDRESS DYSART

DRILLER VARNER WELL CO. DATE DRLD 6-21-61

MAP

SOURCE OF DATA FILE

DESCRIPTION M. P. LSD FEET (ABOVE) (BELOW) LSD

CONTINUED FROM ABOVE	ACCURACY	LOCAL WELL NUMBER T.	R.	E/W	SEC.	QUARTERS	LOCAL USE W-NUMBER	OPTIONAL	OWNER OR NAME	OWNERSHIP	WATER USE	WELL USE	WELL DATA	FREQ. W/L	FIELD CHAR	HYD LAB	QW-DATA	QW-FREQ.	PUMPAGE	APERTURE	LOG DATA	CARD DESIG
	20	21 22 23	24 25	26	27 28	29 30 31 32 33 34	35 36 37 38 39	40 41 42 43 44 45 46 47 48 49 50 51	52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	67	68	69	70	71	72	73	74	75	76	77	78 79	80
	2	085	13	W	24	ABB	12665	/161TØWN	DYSART	M	P	W	1	Ø			C	I			G	A

WELL-DESCRIPTION CARD - B

DUPLICATE CARD A CC 1-19	DEPTH OF WELL	ACCURACY	DEPTH CASED OR FIRST PERF.	DIAM. INCHES	WELL FINISH METH. DRILLED	YEAR DRILLED	PUMP SETTING	METH. LIFT	DEEP/SHALLOW	POWER	ALTITUDE OF LSD (FEET)	ACCURACY	WATER LEVEL (FEET)	ACCURACY	DATE MONTH	DATE YEAR	YIELD OF WELL (GPM)	METH. DET	DRAW-DOWN (FEET)	ACCURACY	PUMPING PERIOD (HOURS)	QUALITY OF WATER IRON	SULF.	CHLOR	HARD	SP. COND.	TEMP	DATE SAMPLED	CARD DESIG.
	20 21 22 23	24	25 26 27 28	29 30	31	32	33 34 35	36 37 38	39	40	41	42 43 44 45 46	47	48 49 50 51	52	53 54 55	56 57 58 59 60	61	62 63 64	65	66 67 68	69	70	71	72	73	74 75 76	77 78 79	80
	1	8	80	31	X	C	961				978	7	221	D	66	1	600	3	125	3								B

HYDROGEOLOGIC CARD - C

DUPLICATE CARD A CC 1-19	PHYS-IOG-RAPHY PROV.	SEC.	DRAINAGE BASIN	SUBBASIN	TOPO SETTING	MAJOR AQUIFER SYSTEM	SERIES USGS	SERIES ISG	UNIT	LITH-OLOGY	ORIG.	THICK-NESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	MINOR AQUIFER SYSTEM	SERIES USGS	SERIES ISG	UNIT	LITH-OLOGY	ORIG.	THICK-NESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	DEPTH TO CONSOL-DATED ROCK	SOURCE	DEPTH TO BASEMENT	SOURCE	SURF MAT LITH-OLOGY	SURF MAT INFIL	COEF TRAN SIG FIG	COEF TRAN XIO	COEF STOR SIG FIG	COEF STOR XIO-	CARD DESIG
	20 21	22	23 24 25	26	27	28	29	30	31	32 33	34	35 36 37	38 39 40	41 42 43	44	45	46	47	48 49	50	51 52 53	54 55 56	57 58 59	60 61 62 63	64	65 66 67 68	69	70 71	72	73 74	75	76 77	78	79 80
	1	2	F	2	5	D			C	3	S	T	V	6					2	0	2	A	68	Ø	1	L	P	Q	D	6	4	3	8	3	78	A	24		160	D			T	4					C

CASING AND SCREEN (SIZE, TYPE, INTERVALS):

604' ØF 14" Ø.D. WALL CASING FRØM SURFACE SWAGED DØWN TØ 10" WITH 14"X10" SWAGE NIPPLE

696' ØF 10" I.D. WALL CASING TØ 1300' WITH SHØE ØN THE BØTTØM

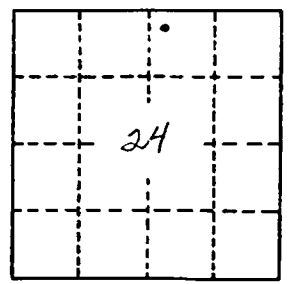
214' ØF 18" LINER FRØM 536' TO 750' WITH SHØES ØN TØP AND BØTTØM.

CODED BY HEXUM DATE 6/26/72

PUNCHED BY HEXUM DATE 6-29-72

VERIFIED BY DATE

SKETCH ON REVERSE: YES NO



WELL NO. 12665

12665
085-13W-24 ABB
DYSART TOWN WELL #1

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Card Q

State: IOWA [19] (1-2) County: TAMA [86] (3-4) Town: DYSART

Well No. Latitude [42095 5N] (5-11) Longitude [092182 8] (12-18) Seq. No. [1] (19) Date M D Y [01 11 62] (20-25)

Sampling Depth [1300] (26-29) Type [1] (30) Kx10^{e} [1010] (31-35) pH [7.4] (36-38) Temp. °F [ ] (39-41)

SiO_2 [8.4] (42-44) Ca [90.] (45-49) Mg [4.1] (50-53) Na [66.] (54-58) K [1.6] (59-61)

HCO_3 [389] (62-65) CO_3 [0] (66-67) SO_4 [224.] (68-72) Cl [65] (73-78) Source No. [3] (79) [Q] (80)

Card R

Duplicate Columns 1-25 from Card Q

F [1.0] (26-28) NO_3 [0.4] (29-32) PO_4 [ ] (33-35) B [ ] (36-38) Al [ ] (39-41) Fe [1.7] (42-45)

Mn [0.05] (46-49) Cu [ ] (50-52) Pb [ ] (53-54) Zn [ ] (55-57)

Solids Determined [680] (58-63) Calc. [ ] (64-69) Hardness Ca,Mg [396] (70-73) Non-Carb. [77] (74-77)

Color [ ] (78-79) No. [R] (80)

Card S

Duplicate Columns 1-25 from Card Q

Br [ ] (26-28) I [ ] (29-31) Alk. as $CaCO_3$ [319] (32-35) Free CO_2 [ ] (36-38) SAR [ ] (39-41)

RSC [ ] (42-44) ABS [ ] (45-47) [ ] (48-50) [ ]

Alpha (pc/l) [ ] (55-57) Beta (pc/l) [ ] (58-60) Ra (pc/l) [ ] (61-63) U (ug/l) [ ] (64-66)

No. [S] (80)

Recorded by: HEXUM

Punched by: MACGOWAN Date: 6-29-72

Published:

12665
085-13W-24ABB
DYSART TOWN WELL #1

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Card Q

State: IOWA (1 2) 19 County: TAMA (3 4) 86 Town: DYSART

Well No. 42095 5N (5–11) Latitude 092 18 28 (12–18) Longitude Seq. No. 1 (19) Date M D Y: 10 23 70 (20–25)

Sampling Depth 1300 (26–29) Type 1 (30) Kx10^6 2100 (31–35) pH 71 (36–38) Temp. °F (39–41)

SiO_2 58 (42–44) Ca 220 (45–49) Mg 102 (50–53) Na 120 (54–58) K 12 (59–61)

HCO_3 403 (62–65) CO_3 0 (66–67) SO_4 910 (68–72) Cl 5 (73–78) Source No. 3 (79) 9 (80)

Card R

Duplicate Columns 1-25 from Card Q

F 19 (26–28) NO_3 04 (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe 29 (42–45)

Mn 05 (46–49) Cu 01 (50–52) Pb 06 (53–54) Zn 10 (55–57)

Solids Determined 1680 (58–63) Calc. (64–69) Ca,Mg 970 (70–73) Hardness Non-Carb. 640 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 330 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Recorded by: HEXUM

Punched by: MACGOWAN Date: 6-29-72

Published:

379	388	9	Lime-trace of blue shale
388	395	7	Lime & blue shale
395	400	5	Lime
400	412	12	Lime-some shale
412	416	4	Gray lime & blue shale
416	421	5	Blue gray shale
421	451	30	Lime & blue shale
451	454	3	Reddish brown clay
454	465	11	Reddish brown shale & lime-sandy
465	471	6	Red shale-caves
471	487	16	Red shale & lime
487	491	4	Blue, gray white lime-hard
491	540	49	Lime-hard
540	552	12	Lime-yellow
552	555	3	Lime-caving
555	560	5	Lime & red shale-caves
560	567	7	Lime & shale
567	600	33	Gray lime
600	608	8	Lime-all colors
608	636	28	Green shale
636	642	6	Shale reddish
642	648	6	Green shale & hard lime
648	712	64	Blue shale & lime
712	722	10	Shale
722	733	11	Shale & lime
733	756	23	Shale-caves
756	768	12	Shale & lime
768	773	5	Shale & lime
773	812	39	Shale-caves
812	842	30	Shale & lime-caves
842	855	13	Shale & lime-caves
855	885	30	Shale & lime-caves
885	888	3	Shale & streak of lime-caves
888	906	18	Lime-hard
906	908	2	White lime hard
908	918	10	Gray lime-caves
918	955	37	Lime & shale caves badly
955	973	18	Brown lime hard
973	1134	161	Lime-hard
1134	1143	9	Lime & shale
1143	1178	34	Lime-gray & hard
1178	1186	8	Brownish lime
1186	1190	4	Lime & shale streak
1190	1203	13	Blue green shale
1203	1204	1	Shale & sandstone
1204	1210	6	Sandstone-dolomite
1210	1228	18	Sandstone fine, gray
1228	1229	1	Sandstone, shale & chalk
1229	1234	5	Sandstone
1234	1240	6	Sandstone & shale

From	To	Thickness	Description of Beds
1240	1242	2	Lime & sand
1242	1246	4	Lime, sand, shale & chalk
1246	1251	5	Shale & sandstone
1251	1258	7	Limestone
1258	1265	7	Sand & shale
1265	1284	19	Lime & shale
1284	1289	5	Lime chalky
1289	1299	10	Lime & shale
1299	1317	18	Lime some dolomite
1317	1321	4	Sandy dolomite
1321	1329	8	White chalky lime
1329	1411	82	Limestone
1411	1415	4	Limestone & shale
1415	1432	17	Limestone-some fine & sandy
1432	1437	5	Sandy lime & shale
1437	1454	17	Sand
1454	1455	1	Sand & dolomite
1455	1475	20	Limestone
1475	1486	11	Lime chalky
1486	1500	14	Lime & shale
1500	1551	51	Limestone
1551	1554	3	Lime & blue shale
1554	1687	133	Limestone
1687	1691	4	Sand
1691	1695	4	Sand, shale & lime
1695	1698	3	Lime shell
1698	1705	7	Sandstone
1705	1718	13	Sandstone & lime
1718	1728	10	Hard sand
1728	1774	46	Sandstone-some shale & lime
1774	1780	6	Shaley sand
1780	1789	9	Lime
1789	1805	16	Lime & shale
1805	1863	58	Limestone-hard
1863	1872	9	Limestone & dolomite
1872	1880	8	Limestone

Water samples taken at 1855' and 1872'.

STATIC WATER LEVELS

From	To	Level
0	257	None recorded
257	283	195'
283	310	215'
310	332	180'
332	351	175'
351	395	165'
395	491	160'
491	535	157'

STATIC WATER LEVELS

From	To	Level
535	596	160'
596	611	152'
611	662	155'
662	959	150'
959	991	165'
991	1025	154'
1025	1258	155'
1258	1321	150'
1321	1337	220'
1337	1354	240'
1354	1372	250'
1372	1486	220'
1486	1512	218'
1512	1880	220'

At the start of the capacity test the static level was 221'. At the completion of the test and the pump was pulled the static level was 218'.

VARNER WELL AND PUMP CO. *Established 1906*

WATER WELLS - DEEP WELL PUMPS - WELL REPAIRS - SOUNDINGS

Contractors

POST OFFICE BOX 237—TEL. DUBUQUE 3-8226
222 EAST FOURTH STREET
DUBUQUE, IOWA

July 10, 1961

IOWA GEOLOGICAL SURVEY

JUL 11 1961

Iowa Geological Survey
Geology Annex
Iowa City, Iowa

Gentlemen,

Enclosed please find a copy of the driller's log of Well No. 2 recently completed for the Town of Dysart, Iowa.

We enclose also a copy of the well capacity test data.

Yours very truly
VARNER WELL & PUMP CO.

R. J. Braun

R. J. Braun
Secretary



(DISTRIBUTORS OF PEERLESS PUMPS)

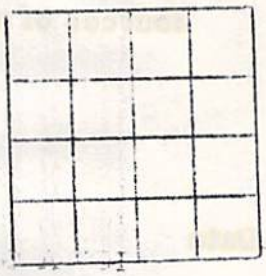
IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey
RECORD OF WELL

W12665

Location: ON EAST EDGE OF PARK

Town: DYSART (NE) (SW) County TAMA

NE NW NE sec. 24 T. 85 N., R. 13 (E) (W) Twp.



Well name and number

Owner DYSART TOWN WELL (1961) Address DYSART, IOWA

Tenant Address

Contractor VARNER WELL CO. Address DUBUQUE, IOWA

Drillers

Drilling dates NOV. 21, 1960 - JUNE 21, 1961

Well data:
Altitudes: Drilling curb feet; Land surface feet 978

Determined by

Topographic position

Total depth: Reported 1880 feet; Measured feet

Drilling method 0-214' ROTARY ; 214 - TOTAL DEPTH CABLE TOOLS

Hole and casing data 152' 6" OF 26" CASING

216' 7" 216' 7" OF 20" CASING

213' OF 18" LINER FROM 536' TO 749'

OF 10" LINER SET @ 1300'

Original depth to water ft. above / below Date

Source of data

Sources of water: Principal Prairie du Chien, Jordan, St. Lawrence

Others

PRODUCTION DATA

Date

Static water level 221'

Pumping water level 346'

Yield (g.p.m.) 600

Measuring point

Duration of pumping

Specific capacity

LABORATORY DATA TL4-135, 136, 137, 138, 139

Well No. W12665 Sample range 0-1880 No. of samples 377

No. of dupls. and cond. 361-fair Washed range 215-1880

Samples prepared by Schlicksalman, John Date July 12, 1961

Logged by Northup Date 1961

Correlations by Date 1961

Whitney — C.R.

Engr = Green Engr. Co.

mud from Dysart well

drilled 1961 by Varner, ~1900'

pump fell in, broke off at bowl assembly
when pulled out at reducer at 600'

SWL 270'

360' pump set

hole reduced from 14" to 10" @600'

mud ~280' on down, or bridged at 280'

364-2451

500 GPM pump, pumping 370 GPM because
higher rated pump is on order.

DYSART, IOWA

MUNICIPAL WELL
DRILLED BY - VARNER, 1961
T. D. 1880 FT.
STATIC 224 FT.
PUMP TEST 600 GPM
P.L. - 346 FT.
D.D. - 125 FT.
SAMPLE COLLECTED 6/22/61 JAS

July 20, 1961

Mr. R. J. Braun, Secretary
Varner Well and Pump Company
P. O. Box 237
Dubuque, Iowa

Dear Mr. Braun:

Thank you very much for your letter of July 17 containing corrections on the casing record for the Dysart No. 2 well.

This information will be valuable to us and we appreciate Mr. Teal's cooperation and yours in getting it to us.

Very truly yours,

H. G. Hershey

HGH:t

VARNER WELL AND PUMP CO. *Established 1906*

WATER WELLS - DEEP WELL PUMPS - WELL REPAIRS - SOUNDINGS

Contractors

POST OFFICE BOX 237—TEL. DUBUQUE 3-8226
222 EAST FOURTH STREET
DUBUQUE, IOWA

July 17, 1961

IOWA GEOLOGICAL SURVEY
JUL 18 1961

Refer to RCN.

Iowa Geological Survey
Geology Annex
Iowa City, Iowa

Gentlemen,

Regarding the log of Well No. 2 for the Town of Dysart which we received from you today, our Mr. E. C. Teal has requested that you be informed of the following correction.

The inner casing cemented in the well consists of the following:

604' of 14" O.D. 7/16" wall casing from the surface swaged down to 10" with a 14" x 10" swage nipple.

696' of 10" I.D. .365 wall casing to 1300' with a shoe on the bottom.

18" O.D. 1/4" wall liner from 536' to 750' with shoes on top and bottom. This liner of course is not part of the inner casing.

Trusting this information is of value to you, we remain

Yours very truly
VARNER WELL & PUMP CO.

R. J. Braun

R. J. Braun
Secretary



(DISTRIBUTORS OF PEERLESS PUMPS)

IOWA PRESS
CLIPPING BUREAU
Des Moines, Iowa

Reporter
Dysart, Ia.

NOV 24 1960

Drilling New Well At Dysart Park

Drilling of the new town well began this week on the terrace of the Dysart park. The Varner Well & Pump Co., of Dubuque, submitted the low bid at the special council meeting held on Oct. 25 and the contract was awarded to the company.

The accepted bid was for the sum of $59,978.40. The well drilling equipment was moved into Dysart last week and is now in operation. Drilling will probably continue throughout the winter months.

According to reports, the well will be at least 1,800 feet deep.

IOWA PRESS
CLIPPING BUREAU
Des Moines, Iowa

Star-Clipper
Traer, Iowa

FEB 9 1962

New Dysart Well Gives Good Flow Of Softer Water

The new town well at the east edge of Dysart park began supplying water last Friday to the town. A total of 375 gallons of water per minute is being pumped into the mains, and this pumping rate can be increased if necessary, according to city electrician Dallas Hennessy.

The new well's water has been warmly welcomed by housewives, since it is about two-thirds softer than water from the old well. The new well is supplying water of 18 to 22 grains hardness, as compared to 57 to 60 grains hardness in water from the old well. Hard water has been a source of discontent to women of the community for many years, and the new well water is making ample suds in washtub and bathtub. It has been approved by the State Department of Health.

There is a slightly different taste in the new water, since much of the mineral content is now gone. Switchover to the new well was accomplished without incident, and few patrons got even a drop of "rusty" water. The mains were well flushed before the cutover, according to Mr. Hennessy.

The old well, located south of the fire station, is being retained on a standby basis. It will be usable in case of emergency. Renovation of this well in the future would provide the town with a very ample supply of water at all times.

Drilled Nov. 21, 1960 to 21 June, 61.

PROPOSED 1960 MUNICIPAL WELL
DYSART, IOWA

HOWARD R. GREEN CO., ENGINEERS — CEDAR RAPIDS, IOWA

GEOLOGICAL FORECAST							CONSTRUCTION LOG							
SYSTEM	FORMATION	DESCRIPTION	THICKNESS FEET	FROM-FT.	TO - FEET	TOP OF 4" CASING 2' ABOVE GND.	TOTAL DEPTH	LENGTH SEC.	DIA. BORE	O.D. CASING	I.D. CASING	TYPE CASING	WALL THICK.
QUATERNARY	PLEISTOCENE	LOESS GLACIAL TILL SAND AND GRAVEL	185	0	185								
	LIME CREEK	SHALE	20	185	205								
DEVONIAN	CEDAR VALLEY	LIMESTONE AND DOLOMITE	200	205	405								
	WAPSIPINICON	DOLOMITE AND LIMESTONE (SANDY TOP 50') CHERT AND LIMESTONE	153	405	558								
SILURIAN	NIAGARAN	CHERTY DOLOMITE	57	558	615								
ORDOVICIAN	MAQUOKETA	MOSTLY SHALE SOME DOLOMITE MINOR CHERT IN LOWER 125 FEET	280	615	895								
	GALENA	LIMESTONE AND DOLOMITE MINOR CHERT	198	895	1093								
	DECORAH-PLATTEVILLE	LIMESTONE 80% SHALE 20%	102	1093	1195								
	ST. PETER	SANDSTONE	30	1195	1225								
	PRAIRIE DU CHIEN	DOLOMITE SANDY UPPER PART 60' SANDSTONE BED IN MIDDLE CHERTY IN LOWER PART	453	1225	1678								
CAMBRIAN	JORDAN	SANDSTONE	102	1678	1780								
	ST. LAWRENCE	DOLOMITE	100	1780	1880								

Final / Proposed

14" O.D. CASING — 21" HOLE — 20" O.D. LINER — 1/4" WALL

1/4"x4' BUILT-UP SHOE — 215 — 215 — 21" — 20" — 19.50 — S — 0.25"

215 — 215 — 21" — 14" — 13.125 — S — 0.437"

19.5" HOLE

PORTLAND CEMENT GROUT 0' TO 1300'

536'

14" X 10" REDUCER — 605 — 390 — 19.5" — 14" — 13.125 — S — 0.437"

604'

10" I.D. CASING

18" O.D. LINER — 1/4" WALL

750'

19" HOLE — 17" hole

1/4" X 4' BUILT-UP SHOE — 955 — 350 — 19" — 18" — 17.50 — S — 0.25"

955 — 350 — 19" — 10.75 — 10.02 — S — 0.365"

971 M.S.L.

17" HOLE

1125 — 170 — 17" — 10.75 — 10.02 — S — 0.365"

16" O.D. LINER — 1/4" WALL

1/4" X 4' BUILT-UP SHOE — 1235 — 110 — 17" — 16" — 15.5 — S — 0.25"

1235 — 110 — 17" — 10.75 — 10.02 — S — 0.365"

15.5" HOLE

CEMENTING SHOE — 1300 — 65 — 15.5 — 10.75 — 10.02 — S — 0.365"

correct

10" HOLE

Actual depth

1880 — 580 — 10"

ALL DEPTHS ARE REFERRED TO M.S.L. OF 971' ASSUMED AT GROUND SURFACE